



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/627,530	07/24/2003	Stuart K. Janikowski	LIT-PI-344.3D1	2921

7590 12/30/2005

Stephen R. Christian
BBWI
P.O. Box 1625
Idaho Falls, ID 83415-3899

EXAMINER

LAMB, BRENDA A

ART UNIT	PAPER NUMBER
----------	--------------

1734

DATE MAILED: 12/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/627,530

Applicant(s)

JANIKOWSKI ET AL.

Examiner

Brenda A. Lamb

Art Unit

1734

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/13/2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-6,8-15 and 17-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6,8-15 and 17-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claims 17-18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The examiner maintains that the originally filed specification fails to teach or suggest the aperture baffle having the multiple substrates arranged in an adjacent matter so as to present a non-linear, non-rectangular cross-section.

If applicant disagrees then it is suggested that applicant point out support in the specification and/or in the drawings.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-2, 4-6, 8-13, 15 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Argyle et al 5,709,910 in view of Beck.

Argyle et al teaches a system for applying a modifying composition to a substrate. Argyle et al teaches the system includes a processing chamber which is configured to accept a treatment mixture to a substrate as it moves there through and the pressure chamber is configured to initiate a pressure drop in the treatment mixture (see column 8 lines 3-4). Argyle et al teaches the entry seal comprises a plurality of baffles, each of the baffles having an aperture and the recited aperture is capable of accepting a substrate that substantially matches but has a slightly smaller cross-section. Argyle et al teaches at column 6 lines 26-31 and column 7 lines 44-59 the passageway with baffles therein may differ in cross-sectional configurations—e.g. rectangular, elliptical and the like which reads on a non-equidimensional aperture as defined by applicant at paragraph 0016 of the instant specification. Argyle et al fails to teach the at least one baffle of the entry seal having an adjustable non-equidimensional aperture. However, it would have been obvious to modify the Argyle et al apparatus by substituting its gas barriers or at the at least one baffle of the entry seal and exit seal which prevent leakage of the contents of the processing chamber with an adjustable gas barrier such that the aperture is adjustable in size such as taught by Beck for the obvious advantage of enabling one to treat a variety of sizes of a substrate of a given cross-section in his process without frictional engaging the substrate. Thus claims 1 and 15 are obvious over Argyle et al. With respect to claims 2, 4-6 and 17-18, Argyle et al shows the processing chamber includes a first region, second region and a constricted

medial region between first and second region which is configured to initiate a pressure drop in the treatment mixture (see column 8, lines 3-41). Further, the aperture of the Argyle et al baffles of the entry and exit seals as modified is capable of accepting a substrate that essentially matches and has a slightly smaller cross-section. Further, the opening of the Argyle et al baffles as discussed at column 6 lines 26-31 and column 7 lines 44-59 may differ in cross-sectional configurations—e.g. rectangular, elliptical and the like and the opening is such that it is configured to pass a substrate within the scope of claims 4-5 and 17-18 dependent on end use requirements of the apparatus and especially given the above cited inference from Argyle's teaching that the passageway along with the aperture of the baffles arranged therein can have a variety of configurations. In addition it is noted that it would have been an obvious matter of design choice to provide the aperture of the Argyle et al baffle with a shape within the scope of the claim since such a modification would have been involved a mere change in the shape of a component. See *In re Dailey*, 149 USPQ 47. With respect to claims 8-11, Argyle et al has a plurality of chambers on either side of the processing chamber which seal and supply an inert fluid at a pressure high enough to prevent leakage of the treatment material from the processing chambers and those fluid filled chambers reads on sealing chambers (entry and exit seal) and expansion chamber, a chamber into which pressurized gas expands, and these chambers are arranged in a manner within scope of claim 8. Further, Argyle et al entry seal and exit seals are fluid filled and are capable of exerting a pressure slightly greater than the pressure in the expansion chamber via pressure flow valve in the treating system. With respect to claims 12-13,

Art Unit: 1734

Argyle et al teaches pressure and temperature levels in the processing chamber are controlled via the combination of heating means 70 and means to control flow of material from material source 66 to the processing chamber (valve 78 and pump 79).

Claims 14 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Argyle et al in view of Beck and Godley 2,545,576.

Argyle et al and Beck are applied for the reasons note above. Argyle fails to teach the apparatus is further comprised of a substrate feed controller. However, it would have been obvious to modify the Argyle et al apparatus to provide a substrate feed controller such as taught by Godley to control speed at which substrate is passed through the system for the taught advantage of increasing uniformity of deposition of material onto the traveling substrate. Thus claim 14 is obvious over the above cited references. With respect to claim 19, Argyle et al teaches a system for applying a modifying composition to a substrate, comprising: an entry seal, wherein the entry seal is adjustable to at least one of a different size and shape for accepting different substrates; a processing chamber in communication with the entry seal and configured to allow movement of a substrate through the processing chamber, wherein the processing chamber comprises an entry baffle allowing entry of a substrate into the processing chamber, a constricted area for reducing the pressure of a treatment mixture introduced into the processing chamber, and an exit baffle allowing exit of a substrate from the processing chamber, an injector in communication with the processing chamber and configured to introduce the treatment mixture into the processing chamber, wherein the treatment mixture comprises a modifying composition in a carrier

medium selected from the group consisting of a supercritical fluid, a near-critical fluid, a superheated fluid, a superheated liquid, and a liquified gas; an exit seal in communication with the processing chamber. Argyle et al fails to teach the exit seal is adjustable to at least one of a different size and shape for accepting different substrates and a substrate feed controller configured to control a speed at which a substrate is introduced into the entry seal. However, it would have been obvious to modify the Argyle et al apparatus by substituting its gas barriers or at the at least one baffle of the entrance seal and exit seal which prevent leakage of the contents of the processing chamber with an adjustable gas barrier such that the aperture adjustable is in size such as taught by Beck for the obvious advantage of enabling one to treat a variety of sizes of a substrate of a given cross-section in a process without frictional engaging the substrate. Further, it would have been obvious to modify the Argyle et al apparatus to provide a substrate feed controller such as taught by Godley to control speed at which substrate is passed through the system for the taught advantage of increasing uniformity of deposition of material onto the traveling substrate.

Applicant's arguments with respect to claims 1, 2, 4-6, 8-15 and 17-19 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's argument that Beck fails to teach or suggest a baffle is found to be non-persuasive. The term "baffle" is defined by Merriam-Webster's Collegiate Dictionary, Tenth Edition, as "a device (as a plate, wall, or screen) to deflect, check, or regulate flow (as of a fluid, light or sound)". The adjustable gate gas barrier of Beck reads on a baffle in that it regulates the flow of gases from adjacent treatment zones in

his apparatus. Therefore, it would have been obvious to modify the Argyle et al apparatus by substituting its gas barriers or at the at least one baffle of each of the entry seal and exit seal which prevent leakage of the contents of the processing chamber with an adjustable gas barrier such as taught by Beck for the obvious advantage of enabling one to treat a variety of sizes of a substrate of a given cross-section in his process without frictional engaging the substrate.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to Brenda A. Lamb at telephone number (571) 272-1231. The examiner can normally be reached on Monday and Wednesday thru Friday with alternate Tuesdays off.

Application/Control Number: 10/627,530

Page 8

Art Unit: 1734

A handwritten signature in black ink, reading "Brenda A. Lamb". The signature is written in a cursive style with a large initial "B" and a stylized "Lamb".

Brenda A Lamb

Examiner

Art Unit 1734